

IN THE CLAIMS:

1. (currently amended) A method for generating an image of a heart at a selected cardiac phase, said method comprising:

acquiring a first electrocardiogram (ECG) of the heart at a first phase;

introducing a time delay into the first ECG using a filter;

generating a phase-delayed ECG of the heart at the first phase ~~[[by]] using a filter to filter and introduce a time delay into the first ECG~~ the time-delayed first ECG;

determining if the phase-delayed ECG and the first ECG have the same approximate information; and

generating an image of the heart if the phase-delayed ECG and the first ECG have the same approximate information.

2. (previously presented) A method in accordance with Claim 1 wherein said generating an image of the heart comprises generating an MRI image of the heart.

3. (canceled)

4. (previously presented) A method in accordance with Claim 1 wherein said determining if the phase-delayed ECG and the first ECG have the same approximate information further comprises receiving at a pulse sequence descriptor (PSD) the first ECG and the phase-delayed ECG, and using the PSD to determine if the first ECG and the phase-delayed ECG comprise the same approximate phase information.

5. (original) A method in accordance with Claim 4 further comprising:

rejecting the first ECG and the phase-delayed ECG based on the phase information included in the first ECG and the phase-delayed ECG; and

re-initializing an MRI system to re-acquire cardiac information of the heart.

6. (original) A method in accordance with Claim 4 further comprising:

rejecting the first ECG and the phase-delayed ECG based on the phase information included in the first ECG and the phase-delayed ECG; and

extrapolating a cardiac phase based on the phase information included in the first ECG and the phase-delayed ECG.

7. (canceled)

8. (currently amended) A method for generating an image of a heart at a selected cardiac phase using an MRI imaging system, said method comprising:

acquiring a first electrocardiogram (ECG) of the heart at a first phase;

introducing a time delay into the first ECG using a filter;

~~acquiring-generating~~ a second electrocardiogram (ECG) of the heart at the first phase  
[[by]] ~~using a filter to filter and introduce a time delay into the first ECG~~ the time-delayed first ECG;

determining if the first ECG and the second ECG have the same approximate information; and

generating an MRI image of the heart if the first ECG and the second ECG have the same approximate information.

9. (previously presented) A method in accordance with Claim 8 wherein after said acquiring a second electrocardiogram (ECG) of the heart at the first phase and before said determining if the first ECG and the second ECG have the same approximate information, said method further comprises receiving at a pulse sequence descriptor (PSD) the first ECG and the second ECG.

10. (original) A method in accordance with Claim 9 further comprising:

rejecting the first ECG and the second ECG based on the phase information in the first ECG and the second ECG; and

re-initializing an MRI system to re-acquire cardiac information of the heart.

11. (canceled)

12. (currently amended) A method for generating an image of a heart at a selected cardiac phase, said method comprising:

acquiring a first electrocardiogram (ECG) of the heart at a first phase;

introducing a time delay into the first ECG using a filter;

~~acquiring-generating~~ a second electrocardiogram (ECG) of the heart at the first phase  
[[by]] ~~using a filter to filter and introduce a time delay into the first ECG~~ the time-delayed first ECG;

acquiring a first plethysmograph signal of the heart at a first phase;

determining if the first ECG, the second ECG, and the plethysmograph signal have the same approximate information; and

generating an MRI image of the heart if the first ECG, the second ECG, and the plethysmograph signal have the same approximate information.

13. (previously presented) A method in accordance with Claim 12 wherein said acquiring a first electrocardiogram (ECG) of the heart at a first phase comprises acquiring a first ECG of the heart at a first phase using a magnetic resonance imaging (MRI) system.

14. (previously presented) A method in accordance with Claim 12 wherein after said acquiring a first plethysmograph signal of the heart at the first phase and before said determining if the first ECG, the second ECG, and the first plethysmograph signal have the same approximate information, said method further comprises receiving at a pulse sequence descriptor (PSD) the first ECG, the second ECG, and the first plethysmograph signal.

15. (previously presented) A method in accordance with Claim 14 further comprising:

rejecting the first ECG, the second ECG, and the first plethysmograph signal based on the phase information in the first ECG and the first plethysmograph signal; and

re-initializing the MRI system to re-acquire cardiac information of the heart.

16. (canceled)

17. (currently amended) A magnetic resonance imaging (MRI) system comprising:

a radio frequency (RF) coil assembly for imaging a subject volume; and

a computer coupled to said RF coil, said computer configured to:

acquire a first electrocardiogram (ECG) of the heart at a first phase;

introduce a time delay into the first ECG by filtering the first ECG;

generate a phase-delayed ECG of the heart at the first phase ~~by filtering and introducing a time delay into the first ECG~~ using the time-delayed first ECG;

determine if the phase-delayed ECG and the first ECG have the same approximate information; and

generate an image of the heart if the phase-delayed ECG and the first ECG have the same approximate information.

18. (canceled)

19. (previously presented) An MRI system in accordance with Claim 17 wherein said computer is further configured to:

receive at a pulse sequence descriptor (PSD) the first ECG and the phase-delayed ECG.

20. (original) An MRI system in accordance with Claim 17 wherein said computer is further configured to:

reject the first ECG and the phase-delayed ECG based on the phase information included in the first ECG and the phase-delayed ECG; and

re-initiate the MRI system to re-acquire cardiac information of the heart.

21. (canceled)

22. (currently amended) A computer program embodied on a computer readable medium for controlling a medical imaging system, said program configured to:

acquire a first electrocardiogram (ECG) of the heart at a first phase;

introduce a time delay into the first ECG using a filter;

~~aequire-generate~~ a second electrocardiogram (ECG) of the heart at the first phase  
[[by]] ~~using a filter to filter and introduce a time delay into the first ECG~~ the time-delayed  
first ECG;

determine if the first ECG and the second ECG have the same approximate  
information; and

generate an MRI image of the heart if the first ECG and the second ECG have the  
same approximate information.

23. (previously presented) A computer program in accordance with Claim 22  
wherein said program further configured to:

receive at a pulse sequence descriptor (PSD) the first ECG and the second ECG.

24. (original) A computer program in accordance with Claim 22 wherein said  
program further configured to:

reject the first ECG and the second ECG based on the phase information in the first  
ECG and the second ECG; and

re-initiate the MRI system to re-acquire cardiac information of the heart.

25. (canceled)